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10/572,194	09/21/2006	Andreas Lingens	5041.1003	2636
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Davidson, Davidson & Kappel, LLC			EXAMINER	
485 7th Avenue			NGUYEN, TU MINH	
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New York, NY 10018			ART UNIT	PAPER NUMBER
			3748	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/572,194

**Applicant(s)**

LINGENS ET AL.

**Examiner**

TU M. NGUYEN

**Art Unit**

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. An Applicant's Request for Continued Examination (RCE) filed on August 17, 2009 has been entered. Per instruction from the RCE, an enclosed Applicant's Amendment has been entered. Claims 13, 19-21, 25, 26, 29, and 31 have been amended. Overall, claims 13-31 are pending in this application.

#### ***Drawings***

2. The drawings are objected to because the declared replacement sheet, which includes Figure 1, has not been received. Applicant is requested to submit another replacement sheet in response to this Office Action.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 29-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In the currently amended claim 29, the amended phrases are new matter, because the phrase “a receiving device located downstream of at least a portion of the filter wall configured to receive a flow of the fluid from the raw gas side of the filter therethrough and to receive and hold the particle constituents, wherein the receiving device is connectable on the raw gas side of the filter wall” does not appear to be described in the original specification and drawings in a way to reasonably explain to one skilled in the art. In fact, the above phrase appears contradictory because the receiving device is claimed to be located at both clean gas side (i.e., downstream of the filter wall) and raw gas side (i.e., receiving device connectable on the raw gas side of the filter wall) at the same time. Furthermore, the phrase “the filter wall and receiving device being arranged such that the stream of fluid passing through the filter wall from the raw gas side forces the particle constituents into the receiving device” does not appear to be described in the original specification and drawings in a way to reasonably explain to one skilled in the art.

In order to expedite the prosecution process of this present application, the examiner assumes that applicants will correct and delete the new matter issues. The examiner will examine the previously presented subject matters accordingly in this Office Action.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**6. Claims 13-26 and 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Arai et al. (U.S. Patent 4,875,335).**

Re claims 29 and 31, as shown in Figure 1, Arai et al. disclose a filter (10) comprising:

- a filter wall (11) dividing a clean gas side (13) and a raw gas side (12) of the filter and configured to separate out particles (combustible soot particles) and particle constituents (non-combustible solid particles) from a stream of fluid (exhaust gas) passing flowing from the raw gas side through the filter wall and to enable the particles to be removed in a regeneration process; and

- a receiving device (41, 43, 46) configured to receive a flow of the fluid from the raw gas side of the filter therethrough and to receive and hold the particle constituents, wherein the receiving device is connectable on the raw gas side of the filter wall.

Re claim 30, in the filter of Arai et al., the receiving device (43, 46) is removably connectable to the filter wall.

Re claims 13 and 19, as shown in Figure 1, Arai et al. disclose a method for operating a filter (10), the method comprising:

- forcibly passing a stream of a fluid (exhaust gas) through a filter wall (11) of the filter from a raw gas side (12) to a clean gas side (13) of the filter so as to separate out particles (combustible soot particles) and particle constituents (non-combustible solid particles) from the stream, wherein the particles and particle constituents are collected by the filter wall (11) on the raw gas side (12); and

- performing (backwashing operation (line 56 of column 6 to line 10 of column 7)) a regeneration process on the filter during operation of the filter to remove particles from the filter

wall and moving particle constituents not removed from the raw gas side of the filter by the regeneration process to a receiving device (41, 43, 46) disposed downstream of at least a portion of the filter on the raw gas side by forcibly passing a stream of fluid (pressurized air) through the filter so that the particle constituents are carried by the fluid to the receiving device.

Re claim 14, in the method of Arai et al., the particles include soot and the particle constituents includes ashes (non-combustible solid particles (see lines 23-35 of column 2)).

Re claim 15, in the method of Arai et al., the regeneration process is performed continuously during operation of the filter.

Re claim 16, in the method of Arai et al., the moving of the particle constituents is performed continuously during operation of the filter.

Re claim 17, in the method of Arai et al., the fluid is a gas (pressurized air).

Re claim 18, in the method of Arai et al., the filter is a particle filter (10) for an internal combustion engine (diesel engine).

Re claim 20, in the method of Arai et al., the fluid stream (pressurized air) is forcibly passed through the filter so that the particle constituents are carried by the fluid to the receiving device is imparted with a pulsating flow to move the removed particle constituents to the receiving device (see at least lines 56-67 of column 6).

Re claims 21-22, in the method of Arai et al., the forcibly passing a stream of fluid through the filter so that the particle constituents are carried by the fluid to the receiving device includes feeding a pressurized medium into the filter on the raw gas side to move the removed particle constituents to the receiving device, wherein the pressurized medium is pressurized air (see line 56 of column 6 to line 10 of column 7).

Re claim 23, in the method of Arai et al., a portion of the fluid stream (pressurized air) flows through the receiving device (41).

Re claim 24, in the method of Arai et al., the receiving device includes a regenerable filter surface (43).

Re claim 25, in the method of Arai et al., the forcibly passing a stream of fluid (pressurized air) through the filter so that the particle constituents are carried by the fluid to the receiving device (41) includes a step of passing a medium (pressurized air) that moves the removed particle constituents to the receiving device through the receiving device and out of a flow outlet leading out of the receiving device and into the clean gas side.

Re claim 26, in the method of Arai et al., as shown in Figure 8, the forcibly passing a stream of fluid through the filter so that the particle constituents are carried by the fluid to the receiving device includes closing an outlet leading out of the clean gas side of the filter and passing a medium that moves the removed particle constituents to the receiving device through the receiving device and out of a flow outlet leading out of the receiving device.

Re claim 28, in the method of Arai et al., the regeneration process is performed thermally (see lines 17-29 of column 7).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al. as applied to claim 13 above.**

The method of Arai et al. discloses the invention as cited above, however, fails to disclose that the regeneration process includes feeding nitrogen dioxide into the filter.

It is well known to those with ordinary skill in the art that instead of pressurized air, Arai et al. utilize nitrogen dioxide gas to regenerate their filter. Therefore, such disclosure by Arai et al. is notoriously well known in the art so as to be proper for official notice.

***Prior Art***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents: Levendis (U.S. Patent 5,390,492), Hijikata et al. (U.S. Patent 5,566,545), Megas et al. (U.S. Patent 7,174,707), and Sellers et al. (U.S. Patent 7,462,222) further disclose a state of the art.



***Communication***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMN

February 15, 2010

/Tu M. Nguyen/

Tu M. Nguyen

Primary Examiner

Art Unit 3748